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ACTIVITIES OF THE UNITED NATIONS SYSTEM IN SCIENCE AND TECHNOLOGY FOR DEVELOPMENT, INCLUDING THOSE OF THE CENTRE FOR SCIENCE AND TECHNOLOGY FOR DEVELOPMENT, THE ADVISORY COMMITTEE ON SCIENCE AND TECHNOLOGY FOR DEVELOPMENT AND THE UNITED NATIONS FUND FOR SCIENCE AND TECHNOLOGY FOR DEVELOPMENT

Activities of the Centre for Science and Technology for Development

Report of the Secretary-General

SUMMARY

The present report provides information pursuant to General Assembly resolution 44/14 on the implementation of the Vienna Programme of Action on Science and Technology for Development, as proposed by the Intergovernmental Committee in its resolution 1 (X). It also includes information in accordance with resolution 2 (X), entitled "Activities of the United Nations system in science and technology for development, including those of the Centre for Science and Technology for Development, the Advisory Committee on Science and Technology for Development and the United Nations Fund for Science and Technology for Development". It covers the following areas of activity: science and technology in high-level forums, endogenous capacity-building, the Advanced Technology Assessment System, harmonization of science and technology activities within the United Nations system, and science and technology information.

* A/CN.11/1991/1.

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INTRODUCTION

1. In consonance with the new orientation given by the Intergovernmental Committee on Science and Technology for Development (IGC) to the activities of the United Nations Centre for Science and Technology for Development since 1986 - namely, to add to the earlier global and general approach a national/regional and specific approach in implementing the Vienna Programme of Action for Science and Technology for Development 1/ - the activities of the Centre are concentrated on the following four subprogrammes:

(a) Endogenous capacity-building and resource mobilization;

(b) Advance technology assessment system (ATAS);

(c) Co-ordination and harmonization of activities of the United Nations system in science and technology for development;

(d) Information services to facilitate access by developing countries to information on science and technology.

2. It may be recalled that IGC felt that this concentration of efforts by the Centre was necessary to ensure the success of the new approach, which was subsequently endorsed by the Administrative Committee on Co-ordination (ACC) in its decision 1989/7.

3. The subprogramme on endogenous capacity-building and resource mobilization emphasizes national dialogues among stakeholders in the development process in specific countries, in cooperation with interested United Nations organizations, as a means of achieving a coalition of resources for the implementation of prioritized portfolios of initiatives ranging from policy measures to projects. With the support of donor Governments and agencies, the dialogues programme reaches 11 countries in all regions.

4. The ATAS subprogramme was envisioned as an early warning mechanism for developing countries. Its objective was to respond to such questions as: what new technologies would have an impact on production, investments, commodity exports, or services? How could developing countries reap the benefit of new technologies or deflect any negative impact?

5. In the subprogramme on coordination and harmonization of activities of the United Nations system on science and technology, the Centre enjoys, on behalf of the Director-General for Development and International Economic Co-operation, close cooperation and exchanges with the United Nations Secretariat and the United Nations system at large. Through its substantive servicing and constant interaction with individual members of the Advisory Committee on Science and Technology for Development (ACSTD), the Centre seeks to enhance its knowledge base and contribute to the practical use of endogenous capacity in science and technology for development.

6. The Centre strives through its subprogramme on information services to facilitate access by interested member States to scientific and technological information and to assist them in conceptualization of policies that may lead to improvements in their information infrastructures. Concrete steps have been taken to interact with the international scientific community, as mandated by the Vienna Programme of Action. Close co-operation and exchanges are maintained with the International Council for Scientific Unions (ICSU), the Third World Academy of Sciences (TWAS) and a significant number of national academies of science.

7. Finally, Update, the Centre's newsletter, has been totally reconceptualized and redesigned and appears to have become a relevant journal, judging from the responses of its increasing readership.

8. Since the tenth session of the Intergovernmental Committee, in 1989, the Centre has continued its efforts to respond more directly to the needs of member States. The Centre is fully implementing the mandate given to it by IGC and in General Assembly resolution 44/14 that it act as the focal point for technology assessment in the United Nations. As required by that resolution, the Committee decided to choose its substantive themes from items on the agenda of the General Assembly having a strong science and technology dimension and to analyse them via the technology assessment approach.

9. The first theme to be selected by the Committee was environmentally sound technology assessment (ESTA), with emphasis on ways and means of facilitating the access of developing countries to such technology and increasing their share of relevant world-wide research and development efforts.

I. SCIENCE AND TECHNOLOGY IN HIGH-LEVEL FORUMS

10. By its resolution 44/14 A, the General Assembly declared that "science and technology should be one of the major components" in the deliberations of the General Assembly at its eighteenth special session on international economic cooperation, revitalization of economic growth, the Ad Hoc Committee of the Whole for the Preparation of the International Development Strategy for the Fourth United Nations Development Decade, the Second United Nations Conference on the Least Developed Countries, and the proposed United Nations conference on environment and development. Responding to that position, the Centre made special efforts to bring science and technology into sharper focus during the preparatory stages and in the course of the discussions at those meetings.

A. Eighteenth special session of the General Assembly

11. The Centre initiated briefings and consultations with a view to incorporating the concept of endogenous capacity-building in science and technology into the recommendations in the Declaration adopted by the General Assembly, at its eighteenth special session, 2/ which, unlike previous declarations, went beyond mere emphasis of the need for access to technologies by developing countries and included reference to the need for endogenous capacity-building in science and technology.

B. International Development Strategy

12. The International Development Strategy for the Fourth United Nations Development Decade, adopted by the General Assembly at its forty-fifth session, in resolution 45/199, contained a detailed section on science and technology. It dealt with the role of technology in modernizing and transforming the industrial and agricultural sectors, advances in science and technology, the critical role of knowledge as a determinant of economic progress, development of traditional technologies as a means of raising productivity, review of the intellectual property system to promote more effectively the economic and technological development of all countries, particularly developing countries, co-operation among developing countries in science and technology and - most importantly - the importance of raising the endogenous capacities and capabilities of developing countries in science and technology. In sum, the new International Development Strategy constitutes a milestone in increasing international awareness of the critical role of modern technology in the development process.

C. Second United Nations Conference on the Least Developed Countries

13. The Centre participated in the Preparatory Committee for the Second United Nations Conference on the Least Developed Countries, and in the Conference itself. It prepared a contribution for inclusion in the Programme of Action for the least developed countries for the 1990s, adopted by the Conference, 3/ focusing on endogenous capacity-building and containing recommendations for implementation at the national and international levels. It also provided, as background information, a compilation of features on science and technology performance for nine least developed countries in the 1980s.

14. Elements of the contribution of the Centre are reflected in a special paragraph of the Programme of Action, under "Strengthening the scientific and technological base". The Programme recognizes the fundamental role of science and technology in the socio-economic development of least developed countries as a necessary condition for their medium- and long-term transformation. It emphasizes the need to enhance endogenous capacity to deal with the development and application of science and technology.

15. Although the inclusion of issues relating to science and technology in the Programme of Action is a major step towards highlighting the role of science and technology in the development of the least developed countries, the Centre feels that continuous attention is required in order to place science and technology in its proper perspective. The least developed countries are likely to be faced in the 1990s with technology choices in which environmental considerations, ranging from local to global nature, will play an increasing role and will accentuate the urgency for those countries to acquire capabilities for technology assessment, in particular to meet international pressures for enviromentally sound technologies.

16. The least developed countries are in need of special strategies in science and technology, given their specific conditions - namely, vulnerability to international developments, serious economic and financial difficulties and the

fact that a majority of them are small in size and lack a critical mass in science and technology to respond effectively to their national needs and to international requirements. The Centre hopes to be able to assist in providing the needed strategies in science and technology for the least developed countries, using as a model the national policy dialogues it is currently conducting in five such countries.

D. United Nations Conference on Environment and Development

17. The Centre has established contact on various occasions with the Secretary-General of the United Nations Conference on Environment and Development. The contacts focused on the need to link and coordinate the work of the Centre on activities relating to the substantive theme of environmentally sound technologies with the overall preparatory work for the Conference. The Centre was represented at the first meeting of the Preparatory Committee of the Conference in Nairobi in August 1990.

18. Through these coordination efforts, the Centre hopes that a common understanding can be reached on the role of environmentally sound technologies, which would help put those technologies into an appropriate perspective in the discussions for possible international conventions to deal with global environmental concerns. As a practical outcome of these efforts, it is hoped that a mechanism could be established which would allow for the current deliberations of the intergovernmental committee on its substantive theme - namely, environmentally sound technology assessment (ESTA) - to be incorporated into the deliberations of the Preparatory Committee for the Conference. As reflected in the report of the Centre on ESTA (A/CN.11/1991/2; see also para. 43 below), special emphasis is given to the need for measures that will enable developing countries to have access to effective use of environmentally sound technologies.

19. Although the contacts and exchanges for linking the work of the Committee on ESTA with the preparatory work of the Conference are still at an initial stage, there are promising signs that the Centre's objective can be accomplished. In addition, the Centre, supporting the relevant initiative of the United Nations Environment Programme, has assigned an officer for environmental matters to provide advice on aspects of the environment relating to science and technology.

II. ENDOGENOUS CAPACITY-BUILDING

20. The Centre has been carrying out pilot projects in endogenous capacity-building since 1987. By 1989 projects were under way in four countries, Jordan (funded by UNFSTD), Nepal (funded by the Government of Switzerland), Thailand (funded by the Government of Japan) and the United Republic of Tanzania (funded by the Government of Germany). In that year, in resolution 44/14 B, the General Assembly urged the Centre and the United Nations Fund for Science and Technology for Development (UNFSTD), in cooperation with other bodies of the United Nations system, to continue to implement the projects. It also urged the United Nations Development Programme (UNDP) and other interested bodies of the United

Nations system and major donor countries to support their implementation, and invited the Advisory Committee on Science and Technology for Development to provide expert advice and support. In response the Centre intensified its efforts to expand the programme by attracting additional extrabudgetary resources.

A. Status of current projects

21. Currently 11 projects are being implemented. In Nepal, two rounds of policy dialogues have been completed and a draft portfolio of prioritized science and technology initiatives has been prepared on energy development and export-oriented industry promotion. What remains to be done is to organize another round of dialogues to review and agree on the portfolio and then to present it to a coalition of resources for support in its implementation, probably through UNDP assistance.

22. In Jordan, preliminary work, including detailed substantive studies, have been completed and authorities in the Government have been trying to establish intersectoral priorities in eight sectors and have undertaken consultations among different stakeholders.

23. In Thailand, the Government is considering ways to integrate the dialogue process with other ongoing planning processes in the country, including the preparation of a 20-year master plan for the development of science and technology and a chapter on science and technology for the next five-year development plan. Once the adjustment is made, and pending clarification of certain outstanding issues, the project is expected to be under way within the next few months.

24. In the United Republic of Tanzania, the first policy dialogue among the stakeholders took place in October 1990. The discussions there centred around two main issues - namely, technology assessment and acquisition in the country; and science and technology in small- and medium-scale industries. In order to turn general recommendations into specific implementable proposals, a national meeting of all research and development institutions with high-ranking representatives of the relevant ministries was held under the auspices of the Tanzania Commission on Science and Technology, the counterpart of the project. It is expected that two more rounds of policy dialogues among stakeholders will take place, starting in the spring of 1991, before a portfolio of prioritized concrete actions will be agreed upon and finalized.

25. In close cooperation with UNFSTD and with funding provided by the Government of Germany, the Centre began new pilot projects in six additional countries: Cape Verde, Jamaica, Pakistan, Togo, Uganda and Viet Nam. The preparatory phase of the programme, including exploratory missions to all the six countries, was completed in 1990. The Centre organized a meeting of representatives from the six countries and concerned authorities in Bonn, with a view to providing a forum for an exchange of views among the participating countries and to agreeing on specific modalities for project implementation. National steering committees have been established, and local consultants were engaged to prepare the studies. The first rounds of policy dialogues are expected to take place in the near future.

26. Preparations for a similar project are under way in the Daging Province of China, to be funded by UNDP and Indicative Planning Figures (IPF). The project is designed to bring about a consensus among different stakeholders in Daging on the programmes to be undertaken following the depletion of the oil reserves in the area.

27. At the completion of these projects, which is scheduled for 1992, comparable empirical data from participating countries will be compiled by the Centre and analysed and evaluated by independent experts. This will allow the formulation of different scenarios of endogenous capacity-building in science and technology which could then be applied by other developing countries, with appropriate adjustments and without major involvement from the Centre.

28. The major features and the basic thrust of the work of the Centre in endogenous capacity-building have recently been adopted by the Development Assistance Committee (DAC) of the Organization for Economic Co-operation and Development (OECD) in its own strategy for promoting science and technology in developing countries.

29. The concept of endogenous capacity-building at the national level via dialogues among stakeholders in the development process will be further refined at the Conference on International Co-operation in Science and Technology for Development: Consolidation of the Dialogue Approach, which will be held in Sweden from 10 to 12 June 1991. The Conference is jointly organized by the Centre and the Swedish Agency for Research Co-operation with Developing Countries. One of the main aims of the Conference will be to promote the operational application of the dialogue process through the support of donor agencies active in the field of science and technology.

30. In paragraph 4 (c) of its resolution 2 (X), IGC called for coordinating the efforts of the specialized agencies and the donor countries to improve the infrastructures of universities and institutions of higher learning in the field of science and technology in developing countries - particularly in Africa. The Centre plans to carry out a study in one of the African countries where it conducts pilot studies on endogenous capacity-building. A report on the study will be submitted to IGC at its twelfth session.

B. Women in science and technology for development

31. The Intergovernmental Committee, in paragraph 9 of resolution 2 (X) requested the Secretary-General to assist developing countries in their efforts to involve women fully as participants in and beneficiaries of activities in the field of science and technology, including technology assessment, the recommended pilot projects and the proposed national dialogues. The Committee also requested the inclusion in the present report of a section on the progress made in the involvement of women in the various subject areas.

32. The number of women members of ACSTD increased from one in 1986 to seven in 1989. In countries where national policy dialogues are being conducted or planned for the near future, conscious efforts are being made to involve women

entrepreneurs, group leaders and consumers as participants. For other countries, where preparatory work is still in its initial stage, prominent women, such as those heading national societies for scientists and engineers or other science and technology-related institutions and enterprises, are expected either to join the steering committees responsible for the planning and execution of the projects or to carry out some of the in-depth policy studies. In some instances - for example, Pakistan and Togo - the issue of improving the status of women may very well become one of the substantive themes for the policy studies.

33. In activities related to technology assessment, the actual or potential impact on women is considered one of the important criteria for selecting and adopting technologies. Women, therefore, are urged to participate directly in technology assessment and decision-making processes, to the extent possible.

34. On the issue of environmentally sound technologies, in particular, women should be considered as beneficiaries as well as contributors. They play an important role as agents in promoting the use of improved cooking stoves, reforestation, recycling of waste materials etc.

C. Desertification

35. The Centre, in cooperation with the State Science and Technology Commission of China, organized an international seminar entitled "Desertification processes of contiguous areas: science and technology policy issues and options" in Lanzhou from 25 June to 3 July 1990. The seminar was a follow-up to the substantive theme of IGC in 1987, "Application of science and technology to the study, prevention, monitoring and combating of drought, desertification and other natural disasters".

36. In accordance with resolution 2 (IX) of the Committee, the seminar focused on examining site-specific small-scale approaches to combating drought and desertification problems, technologies used to raise productivity in arid and semi-arid areas, patterns of relevant socio-economic behaviour, and potential areas and coordinated modes of cooperation among countries with common problems in adjacent areas. Due emphasis was placed on endogenous capacity-building to not only implement countermeasures to desertification but also develop arid and semi-arid and sub-humid areas. Involving all the stakeholders - particularly practitioners such as farmers, foresters and extension workers - was considered necessary to successful site-specific efforts. As a direct outcome of the seminar, an exchange of researchers between China and Mongolia was agreed upon, and further cooperation projects may evolve.

D. Science and technology methodologies

37. In paragraph 7 of its resolution 2 (X), IGC decided to ask the Centre to submit a report on available scientific methodologies for the planning and management of science and technology policy to promote the development of science and technology in developing countries. The report, prepared in cooperation with the relevant bodies of the United Nations system and organizations in developing

countries, was reviewed by ACSTD and is before the Committee as a conference room paper (A/CN.11/1991/CRP.2). It surveys experiences shared by different countries and regions in the process of planning and managing science and technology for socio-economic progress. It takes into account changing social, economic, political and environmental conditions and their contradictory effects, especially on the developing world.

38. Understandably, the absence of standardized scientific methodologies for the planning and management of science and technology policy is causing some problems, particularly as it applies to various national or regional conditions. Nevertheless, some general conclusions could be drawn as to the problems and features of different approaches common to such methodologies, and components of common validity have been summarized.

39. The conclusions, although general, could assist developing countries with problems deriving from the implementation of science and technology policies and programmes - including capacity-building and adequate management. After taking into account the views of IGC, the Centre proposes to submit the report to appropriate bodies at the national, regional and international levels as guidelines for national science and technology policies.

III. ADVANCED TECHNOLOGY ASSESSMENT SYSTEM

40. Over the years, it has become clear that the ultimate goal of ATAS should be to enable developing countries themselves to conduct their own assessments of technologies of interest to them. Hence, technology assessment, as a component of the decision-making process, is seen as an integral part of endogenous capacity-building. Increasingly, the related activities of the Centre, in cooperation with other bodies of the United Nations system, are directed towards assisting developing countries to organize and strengthen their technology assessment capability and link it to national decision-making. Through its ATAS and endogenous capacity-building projects, the Centre seeks to define the parameters and criteria for a methodology of assessment.

41. The General Assembly in its resolution 44/14 E and, earlier, IGC in its resolution 1 (X) recognized the linkage between technology assessment and capacity-building when they requested the Centre to study ways and means of assisting developing countries in enhancing their capacity to assess new technologies and recommended that a study be undertaken regarding new materials and the processing of raw materials. (The activities of the Centre in response to that specific request are referred to in paragraphs 52-58 of the present report.)

42. In its resolution 44/14 E, the General Assembly also entrusted the Centre, through its ATAS programme and in cooperation with other United Nations bodies, "to serve as the focal point for technological assessment within the United Nations system and, where possible, for relations with Governments and non-governmental organizations concerning technological assessment activities in Member States" and resolved that the Intergovernmental Committee would "choose subjects of particular significance with major science and technology dimensions with a view to providing

an assessment of technology and related policy analysis in order to facilitate the debate of the question in the General Assembly." By so deciding, the General Assembly has, in effect, established IGC, with support from the Centre, competent bodies of the United Nations system and other concerned organizations, as its focal point for technology assessment.

43. With that mandate, the Centre provided IGC with technology assessment analysis and prepared the report on the theme chosen by the Committee for its eleventh session: "Ways and means of ensuring the participation of developing countries in international cooperation for research on and development of environmentally sound technologies, and the rapid and effective transfer of such technologies to those countries". The assessment is contained in document A/CN.11/1991/2 and in a background paper entitled "Environmentally sound technology assessment (ESTA)".

A. Technology assessment activities

44. Assessment of new technologies and their application under terms and conditions in developing countries is generally undertaken through a series of international and regional workshops to which all stakeholders in the development process - policy makers, scientists, engineers, entrepreneurs, union leaders, producers and users - are invited, as well as the relevant organizations in the United Nations system. In addition, members of the Technology Assessment Network also participate. The conclusions and recommendations of the discussions generated by the meetings are subsequently published, either as an issue of the ATAS Bulletin or as a supplement to a previous Bulletin, depending on whether the topics are related to new assessments of clusters of technologies or are merely narrowing the focus of a previous Bulletin to a regional or national dimension. Generally a set of technologies is examined at the global level and later interpreted in regional-specific terms. National interpretations could evolve eventually, particularly through the national stakeholders' dialogues.

45. Two elements have been introduced into the ATAS Bulletin to improve its relevance and comprehensiveness. The first has already been referred to: the dedication of an issue to issues of concern to the General Assembly. The second is the formation of the new Technology Assessment Network, which is comprised of institutions organized into a small core group, with open membership, selected from among technology assessment institutions world wide. The membership is comprised of institutions, because the Centre is seeking to bring together the institutional experience and resources in order to increase awareness of technology assessment among developing countries and establish flexible metholodogies and work with developing countries in support of their planning processes. Furthermore, the Network enables the Centre to fulfil its role as focal point for technology assessment within the United Nations system.

B. Topics and workshops

46. A series of workshops on new energy technologies and development began in late 1988 and was completed in the spring of 1990. Three workshops - in Moscow, Guatemala City and Ottawa - assessed the technologies available for specific areas of demand: electricity and industrial heat; the disconnected (rural and remote) sector; and transportation. A fourth workshop, in Saarbrucken, Germany, examined the links between the use of energy technologies and climate change. A selected group of papers from the four workshops was edited and published by the United Nations as the ATAS Bulletin, VI, in early 1991.

47. ATAS has assessed environmentally sound technologies, with particular attention to examining ways and means for ensuring the participation of developing countries in international cooperation for research on and development of those technologies and their rapid and effective transfer to those countries. Contributions to the assessment were sought from a number of international experts, members of the Technology Assessment Network and the United Nations system. In addition, contributions to ESTA were drawn from discussions in international workshops and seminars, including meetings organized by the Centre with support from donors, such as the international seminar on desertification processes, held at Lanzhou, China (see para. 35); the International Conference on Energy in Climate and Development, in Saarbrucken, Germany (28-31 May 1990); and the Workshop on Creative Financing for Environmentally Sound Technologies, in Belem, Brazil (26-28 November). The Centre will take into account the views of IGC before proceeding with the publication of the ATAS Bulletin, VII, on ESTA.

48. A regional meeting was organized in Dakar, Senegal, in October 1990 as a follow-up to the first ATAS Bulletin, on tissue culture and development. The meeting examined the potential of biotechnology for food production in the dry areas of Africa. Among the issues discussed were frontier research and development in drought-related biotechnology; obstacles to a "green revolution" in Africa; the integration of new biotechnologies into countries affected by the food crisis; methodologies for assessment of biotechnology for food production; environmental implications of biotechnology and guidelines for its effective use; infrastructure for the planning, training and popularization of biotechnology.

49. The workshop adopted guidelines and recommendations for meeting the demand for biotechnology in food production in dry areas, with particular reference to the identificiation by African countries of their priorities for capacity-building in research, development and commercialization of biotechnology and for the assessment and integration of biotechnology in African countries. The results of the workshop will be published as a supplement to ATAS Bulletin, I.

50. One of the characteristics of most advanced technologies is their interdisciplinarity and interconnectedness. Thus, the workshop entitled "Progress in photovoltaics and the potential for mass production of solar cells in industrialized and developing countries", which is scheduled to be held in 1991 in Sao Paulo, Brazil, will assess issues related to energy, new materials and the environment. The focus of the workshop is on those developing countries that are already active in solar energy technology and can quickly absorb recent advances in photovoltaic science and technology.

51. While photovoltaics may prove to be one of the most appropriate sources of renewable energy for developing and developed countries alike, millions of households and industries continue to rely on coal combustion, often in its most inefficient and environmentally damaging form. Consequently, the Centre, in cooperation with the Government of China, is organizing an international conference to be held in China in 1991 on the reduction of CO_2 emissions with clean coal technology. The meeting will be followed by workshops of a similar nature in India and the Soviet Union in late 1991 and 1992, respectively.

52. A workshop on space applications for the benefit of developing countries, scheduled for October 1991, is being jointly organized by the Outer Space Affairs Division of the Department of Political and Security Council Affairs and the Centre. It will benefit from the support of the International Astronautical Federation and will be held in Montreal, Canada, in conjunction with the Federation Congress. It will assess the needs and opportunities for secondary applications and spin-offs of space technologies in developing countries and promote the identification of priorities and the involvement of developing countries in areas of space technology research and development, which are particularly meaningful in secondary application and spin-off generation.

C. New materials

53. The appearance and rapid adoption by industry of advanced materials which have greater knowledge content per unit weight has caused a global alteration in the correlation between production and consumption of conventional raw materials on the world market. Market stagnation or fluctuation can hurt the economies of developing countries, especially those which are the major exporters of raw materials. Thus, they must reconsider their policies in this vital area.

54. A workshop on advanced materials technology and development was held in May 1989 in the Soviet Union, the first regional meeting after the appearance in 1988 of the ATAS Bulletin, V, on new materials technology and development. The workshop addressed questions of particular concern for Asia. The final report, including recommendations for national and regional strategies, was adopted as a regional plan of action on new materials.

55. Special meetings were held between representatives of participating United Nations organizations - the Centre, the Economic and Social Commission for Asia and the Pacific (ESCAP), and the United Nations Industrial Development Organization (UNIDO) - in order to determine ways of cooperating in suggested follow-up activities. A UNIDO consultant will visit selected Asian countries to review and assess each country's situation on materials technology research and development and to identify areas of regional cooperation and appropriate counterparts for the establishment of a regional network of materials technology. It is expected that a joint project proposal on new materials will be submitted by UNIDO, the Centre and ESCAP to UNDP for implementation.

56. Another initiative linked to the ATAS Bulletin, V, is the workshop jointly organized by the Centre and the African Development Bank, in cooperation with UNIDO and the Economic Commission for Africa (ECA), on new and traditional materials for development, to be held in Abidjan, Côte d'Ivoire in 1991. The workshop will attempt to translate the global perspective into an African regional and national one. It will provide a forum where African scientists, technologists and policy makers can discuss the issues with a view to setting priorities and defining modalities for cooperation.

IV. HARMONIZATION OF SCIENCE AND TECHNOLOGY ACTIVITIES WITHIN THE UNITED NATIONS SYSTEM

57. The importance of inter-agency cooperation and coordination at the Secretariat and country levels has repeatedly been emphasized by IGC and the General Assembly. The Centre has sought to promote cooperation and coordination through its endogenous capacity-building projects and the mechanisms of the ACC Task Force on Science and Technology for Development, of which the Centre is the secretariat.

A. ACC Task Force on Science and Technology for Development

58. The Task Force held its eleventh session in New York from 7 to 9 May 1990. It discussed the substantive theme for the eleventh session of IGC (environmentally sound technologies) and reviewed the relevant outline prepared by the Centre. It also continued to discuss system-wide coordination and cooperation activities in the process of endogenous capacity-building, including pilot studies being carried out by the Centre and country-level inter-agency missions on national science and technology programmes. The Task Force was apprised of the results of the informal high-level meeting convened by the Director-General for Development and International Economic Co-operation on 26 March 1990 at UNESCO Headquarters to discuss improved coordination and cooperation in science and technology.

59. At its twelfth session in New York, from 6 to 8 February 1991, the Task Force discussed in particular the conclusions of the twenty-fifth meeting in the series of joint meetings of the Committee for Programme and Coordination (CPC) and the Task Force, held in October 1990, on the improvement of coordination in the United Nations system.

B. Preparations for the twelfth session of the Intergovernmental Committee

60. The Centre assisted the Director-General in preparing the report to IGC, as requested by the General Assembly in resolution 44/14 C, on developments and trends in the activities of the United Nations system in science and technology. The report (A/CN.11/1991/5) takes into account the contributions of 26 entities of the system and deals with three main areas: endogenous capacity-building; technology monitoring assessment and forecasting; and coordination and cooperation at the country level.

C. Regional and interregional bodies

61. Within the framework of the Latin American economic system, the Centre participated in the second special session of the Latin American Commission for Science and Technology, held in Caracas, Venezuela, from 23 to 25 April 1990, to consider the 1990-1991 work plan of the Commission.

62. The Centre plays a focal-point role in the field of science and technology as regards cooperation between the United Nations system and the Organization of the Islamic Conference. It participated in the Joint Inter-Secretariat meeting held in Vienna from 12 to 14 September 1990. It maintains a close working relationship with the Islamic Foundation for Science, Technology and Development, which is the counterpart organization within the OIC.

V. SCIENCE AND TECHNOLOGY INFORMATION

A. Directory of national and regional sources

63. Most of the organizations of the United Nations system operate technical information networks and systems which have national and regional counterparts. A directory of existing systems, services, data bases and programmes is now available at the Centre in machine-readable diskette format for IBM-PC or compatible hardware.

B. Information for small- and medium-sized enterprises

64. As a follow-up activity to an international seminar on distributed data bases, held in May 1988 in Beijing, the Centre launched an initiative to improve information management in small- and medium-sized enterprises in developing countries. The proceedings of the seminar, entitled "Bridging the information gap for small and medium enterprises", have been published and are available to interested users from developing countries.

65. In response to a recommendation of the seminar to execute pilot studies, the Centre has developed several project proposals intended to provide small- and medium-sized enterprises with consulting services to improve their information management and user access to and application of new information technologies. These proposals are also intended to assist Governments in their efforts to elaborate policies and concepts to support small- and medium-sized enterprises and encourage creation of new enterprises in the information industries.

66. The Centre is seeking cooperation with other United Nations bodies, Governments and donor agencies to implement these pilot studies. Following relevant consultations with the Governments of Macau and China, the Centre hopes to launch soon the first series of such pilot projects.

C. Register of research

67. Almost all of the organizations of the United Nations system directly undertake, fund or support research activities in science, technology, economic or social development. A single, readily available source of information on such planned research, research in progress and the results of research already undertaken would be useful to the United Nations system as a whole, as well as to Governments, aid agencies and the international community of scholars. The Centre and the United Nations University (UNU), with data input and cooperation from United Nations research institutes, plan to develop within the next two years a register of research in the United Nations system.

68. A meeting of heads of United Nations research institutes was convened by the Director-General for Development and International Economic Co-operation (Geneva, 11 July 1990) to discuss practical cooperation among the institutes. The proposed register of research was one of the items on the agenda. The participants welcomed the proposal of the Centre and UNU and shared the views expressed by the Secretary-General in his report to the General Assembly at its forty-fourth session (A/44/611) about the potential benefits that the register might bring to the entire United Nations system.

D. Provision of scientific and technical literature

69. The Centre continued to provide, on a selective basis, current scientific and technical journals to research institutes and universities in developing countries. The Centre proceeds in close cooperation with the International Council of Scientific Unions, the International Centre for Theoretical Physics, the Third World Academy of Sciences, the American Association for the Advancement of Science, and others. Furthermore, the Centre continued its efforts to provide technical literature in Portuguese to Lusophone African countries - namely, Angola, Mozambique, Cape Verde and Guinea-Bissau.

E. Update

70. The quarterly newsletter of the Centre, Update, widened its scope and is covering more activities in science and technology undertaken by other United Nations bodies, scientific institutions and non-governmental organizations. Update invited and received contributions and commentaries from both within and outside the United Nations system. The graphical presentation of the newsletter was improved. Furthermore, issues were prepared around specific topics - for example, the role of women in development, environmentally sound technologies, energy technologies, disarmament and conversion etc.

71. In an effort to increase the readership of Update, a special effort has been made to reach stakeholders in the development process throughout the world. Efforts were also made to enlarge substantially the readership of its French edition with the assistance of Francophone organizations. Notwithstanding the many logistical constraints, the Centre hopes to be able, in the near future, to ensure

that the English and French editions of Update are issued simultaneously. The "CSTD Profile" - a succinct description of the programme and major activities of the Centre - is issued on a biennial basis and distributed widely.

F. In-house seminars

72. In-house seminars were organized by the Centre on an occasional basis and featured policy makers from member States and outstanding experts on topics related to the programme of the Centre. Experts from the private sector and members of the Advisory Committee addressed a wide range of issues.

G. Reference facility

73. The reading room of the Centre has been considerably enriched with published and unpublished scientific and technical literature from member States, intergovernmental organizations, non-governmental organizations and organizations of the United Nations system. The material covers sectoral technical subjects - i.e., nutrition, environment, agriculture etc. - for reference work. The collection is supported by a computerized index for easy search and retrieval.

VI. MEETING OF EMINENT PERSONS TO DISCUSS PEACE, DEVELOPMENT AND THE ROLE OF SCIENCE AND TECHNOLOGY

74. On the eve of the special commemorative session of the General Assembly, marking the tenth anniversary of its adoption of the Vienna Programme of Action, the Secretary-General convened a Panel of Eminent Persons to discuss peace, development and the role of science and technology. The two main objectives of the panel which met from 25 to 26 October 1989, were:

(a) To undertake, in the context of the debate of the General Assembly, a broad-ranging and frank review of interaction between science and technology and social and economic problems as they affect national and global peace, stability and equitable prosperity;

(b) To suggest a few concrete measures to the Secretary-General of the United Nations as a basis for initiatives in the social/economic areas which would parallel his efforts on the political front.

75. In a statement to the special commemorative session of the General Assembly, the Panel indicated that the challenge that lay ahead was how to harness modern science and technology so as to achieve the desired economic growth rates based on sound ecological ground rules. To that end, they proposed the launching of what they called a bold "Planet Assurance Programme" to help close the North/South gap in technology development and application and also to safeguard the global environment. The Panel suggested and urged the adoption of a five-point action programme in order to transform the vision of the 1979 Vienna Conference into reality.

76. In the light of the recommendations of the Panel, the Centre is prepared to give special attention to the topic of conversion of military technologies to civilian uses and to include that topic to its programme of work.

VII. EXTRABUDGETARY RESOURCES IN SUPPORT OF ACTIVITIES OF THE CENTRE

77. Most of the activities of the Centre on endogenous capacity building and technology assessment could not have been implemented or initiated without the generous support of member States and intergovernmental and non-governmental organizations, active in the field of international cooperation in science and technology for development. The Centre wishes to express its deep appreciation to those donors for their material and substantive support.

Notes

1/ See Report of the United Nations Conference on Science and Technology for Development, Vienna, 20-31 August 1979 (United Nations publication, Sales No. E.79.I.21 and Corr.1 and 2), chap. VII.

2/ Declaration on International Economic Co-operation, in Particular, the Revitalization of Economic Growth and Development of the Developing Countries. See General Assembly resolution S-18/3 of 1 May 1990.

3/ See Report of the Second United Nations Conference on the Least Developed Countries, Paris, 3-14 September 1990 (United Nations publication, forthcoming).